Pharmacology and Therapeutics

COUNCIL ON PHARMACY AND CHEMISTRY OF THE A. M. A.

(Reported by W. A. Puckner, Secretary)

The November report of the Council on Pharmacy and Chemistry notices a number of new remedies admitted to New and Non-official Remedies, as well as some interesting data about other remedies:

Mercurialized Serum-Lederle for Intravenous Use—Lederle Antitoxin Laboratories;

Silvol—Parke, Davis & Company;

Arsenobenzol—Dermatological Research Laboratories and **Arsphenamine,** Dermatological Research Laboratories: These products are now marketed by the Abbott Laboratories as Neoarsphenamine—D. R. L. and Arsphenamine—D. R. L. The Council has continued the acceptance for New and Non-official Remedies under these names.

Tetanus Antitoxin, Purified—A tetanus antitoxin, concentrated (New and Non-official Remedies, 1922, p. 281), that is also marketed in syringe containers of 10,000 units. E. R. Squibb & Sons, New York.

Staphylococcus Vaccine—This product (New and Non-official Remedies, 1922, p. 306), is marketed in packages of four syringes containing, respectively, 100, 250, 500, and 1000 million killed staphylococcus aureus and staphylococcus albus in equal proportion; in packages of four ampules containing, respectively, 100, 250, 500, and 1000 million killed staphylococcus aureus and albus in equal proportion (with a syringe); and in vials of 5 cc., 10 cc., and 20 cc., each cubic centimeter containing 5000 million killed staphylococcus aureus and staphylococcus albus in equal proportion. E. R. Squibb & Sons, New York.

Streptococcus Vaccine—This product (New and Non-official Remedies, 1922, p. 308) is marketed in packages of four syringes containing, respectively, 100, 250, 500, and 1000 million killed streptococci; in packages of four ampules containing, respectively, 100, 250, 500, and 1000 million killed streptococci (with a syringe) and in vials of 5 cc., 10 cc., and 20 cc., each cubic centimeter containing 1000 million killed streptococci. E. R. Squibb & Sons, New York.

Typhoid Vaccine—This product (New and Non-official Remedies, 1922, p. 310) is marketed in packages of four syringes containing, respectively, 100, 250, 500, and 1000 million killed typhoid bacilli; in packages of four ampules containing, respectively, 100, 250, 500, and 1000 million killed typhoid bacilli (with a syringe); and in vials of 5 cc., 10 cc., and 20 cc., each cubic centimeter containing 1000 million killed typhoid bacilli. E. R. Squibb & Sons, New York.

Typhoid Vaccine Combined, Immunizing—A typhoid vaccine (New and Non-official Remedies, 1922, p. 310) that is marketed in packages of three syringes, one containing 500 million killed typhoid bacilli and 375 million each of killed paratyphoid A and paratyphoid B bacilli, and each of the other two syringes containing 1000 million killed typhoid bacilli and 750 million each of killed paratyphoid A and paratyphoid B bacilli; in packages of three ampules containing, respectively, the same dosages as the three-syringe package (with a syringe); in packages of thirty ampules, hospital size; and in vials of 5 cc., 10 cc., and 20 cc., each cubic centimeter containing 2500 million killed bacilli. E. R. Squibb & Sons, New York.

Staphylo-Acne Vaccine—A mixed bacterial vaccine (New and Non-official Remedies, 1922, p. 314) that is marketed in packages of four syringes, the first containing a mixture of 50 million each of killed staphylococcus albus, or killed staphylococcus aureus and of killed acne bacilli, the second containing a mixture of 125 million each of killed staphylococcus albus, of killed staphylococcus aureus and of killed acne bacilli, the third containing a mixture of 250 million each of killed staphylococcus albus, of killed staphylococcus aureus and killed acne bacilli, the fourth containing 500 million each of killed staphylococcus albus, of killed staphylococcus aureus and of killed acne bacilli; in packages of four ampules containing the same dosages as the four-syringe package (with a syringe); and in vials of 5 cc., 10 cc., and 20 cc., each cubic centimeter containing 1500 million killed bacteria. E. R. Squibb & Sons, New York.

Colon Vaccine—A colon bacillus vaccine (New and Non-official Remedies, 1922, p. 299) that is marketed in packages of four syringes containing, respectively, 100, 250, 500, and 1000 million killed bacilli; in packages of four ampules containing, respectively, 100, 250, 500, and 1000 million killed bacilli (with a syringe); and in vials of 5 cc., 10 cc., and 20 cc., each cubic centimeter containing 5000 million killed bacilli. E. R. Squibb & Sons, New York (Journal A. M. A., November 4, 1922, p. 1609).

Normal Horse Serum—P. D. & Co.—This product (New and Non-official Remedies, 1922, p. 278) is marketed in packages containing one 10 cc. syringe container (Bio. 50); in packages containing one 10 cc. rubber-stoppered bulb (Bio. 52), and in packages containing one 30 cc. rubber-stoppered bulb (Bio. 53). Parke, Davis & Co., Detroit.

Rabies Vaccine (Cumming)—An antirabic vaccine (New and Non-official Remedies, 1922, p. 290). The virus is prepared by dialyzing a 1 per cent suspension of brain tissues (from a rabbit dying of rabies induced by an injection of fixed virus) against running distilled water until the active virulent virus is destroyed. The treatment is divided into two classes: Mild, requiring fourteen doses; severe, requiring twenty-one doses. One dose, 2 cc., is given daily over a period of either fourteen or twenty-one days. Each package (Bio. 440) consists of seven syringe containers of 2 cc. each (one dose). Parke, Davis & Co., Detroit.

Propaganda for Reform

Abrams' "Oscilloclast"—This is a piece of electrical apparatus which is said to produce vibrations of varying rate. Its use is based on Abrams' theory that "specific drugs possess a like vibratory rate as the diseases for which they are effective." Instead of using a drug, one starts the "Oscilloclast" going, moves the indicators to the number corresponding to the vibration rate of the indicated drug and applies the instrument to the sufferer, who, it is alleged, then gets the therapeutic action of the drug in question. The "Oscilloclast" is not for sale. It may be leased (for about two hundred dollars) on signing a contract that the instrument will not be opened. Within the past few months, Abrams has been making bids for osteopathic patronage. The followers of the cult have not been slow to respond. The lure of the dollar and the bizarre is irresistible. Many of the lessees of the "Oscilloclast" are individuals who for years have lived in what may be called the twilight zone of professionalism, where it is difficult to distinguish between the visionary with a fad and the quack, or near quack, with a scheme.—Journal A. M. A., November 4, 1922, p. 1626.

Caroid—This is a preparation of papain (obtained from papaya). Caroid was first marketed by the American Ferment Co. and later by Mead, Johnson & Co. For a considerable time, the Council on Pharmacy and Chemistry had caroid under consideration, and in the end rejected the product on account of its variability. Although caroid was found more active than other preparations of papain, examination showed that the claims for its digestive efficiency were exaggerated. Since the

publication of the Council's report in 1914, Mead, Johnson & Co. do not seem to have made any propaganda for caroid. It is now being promoted by the American Ferment Co., but this firm has not requested a consideration of the product by the council.—Journal A. M. A., November 4, 1922, p. 1629.

The A. M. A. Chemical Laboratory—When, some seventeen years ago, the Council on Pharmacy and Chemistry began its work of turning the light on proprietary medicines, its main concern was to let physicians know the compositions of many of the proprietary medicines widely advertised in medical journals. At that time the exposure of false or vague and meaningless declarations of identity was considered of basic importance. This fact is shown by the name of the Council and by the appointment at that time of many chemists and pharmacists as members of the Council. This need for work which should bring home to the medical profession the essential secrecy of the drug preparations which they were asked to prescribe lead also to the establishment of the A. M. A. Chemical Laboratory. The initial reports of the Council gave the medical profession the first definite statement of many proprietaries then advertised extensively. Though many of these proprietaries were offered to the profession as new chemical discoveries, they were, in fact, simple mixtures of well-known chemicals, and their analysis presented little difficulty. As the result of this work of the Council and the Laboratory, most promoters of pharmaceutical specialties know better than to invest money in the exploitation of mixtures, the sale of which would be interfered with when there is a disclosure of its composition. But this does not mean that today the composition of all proprietaries is correctly declared. Proprietaries are still to be found which sail under false colors as to their composition.

The work of the Chemical Laboratory, however, has become more difficult. Instead of analyses of mixtures, the Laboratory has to do with new compounds of novel composition, which do not have the chemical composition or chemical constitution ascribed to them. A report of the Council on Pharmacy and Chemistry of Galyl is an example of the more difficult work now required of the Laboratory. The Laboratory investigated the product, and reached the conclusion that its administration amounted to the giving of arsphenamin (in the form of the sodium compound) with extraneous inorganic material, and thus obviated the need of comparative clinical trials of Galyl with arsphenamin.—Journal A. M. A., November 11, 1922, p. 1690.

Barium Sulphate for Roentgen-Ray Work—A manufacturer of barium sulphate for Roentgen-ray work reported to the Council on Pharmacy and Chemistry that, though its product is free from objectionable impurities and equal to that of other brands on the market, it was confronted with the difficulty that its product, when tested by the standards of New and Non-official Remedies, appeared to contain acid-soluble barium salts. It urged that the phosphate test be omitted in that it showed a noticeable phosphate reaction when barium phosphate is totally absent, but when a non-poisonous and unobjectionable phosphate (such as calcium phosphate) was present. The manufacturer submitted the tests which he employed, which also included a test for the fineness (fluffiness) of the product.

The A. M. A. Chemical Laboratory deemed the objection to the phosphate test well founded and the proposed revision of the test for soluble barium and the "fluffiness" test worthy of consideration. The Laboratory submitted the suggested tests to the firms whose brands of barium sulphate stood accepted for New and Non-official Remedies and also to a group of users of barium sulphate. In general, the manufacturers agreed to the proposed new tests. Many of the users of barium sulphate held, however, that extreme fineness was not essential. Several objected to the high price charged for some of the very finely divided products. In consideration of the available evidence, the Laboratory recommended to the Council that the "fluffiness" test be not adopted, that the phosphate test be omitted, and recommended in its place a test which will require reasonable freedom from foreign salts, along with tests which shall guarantee freedom from water and acid soluble barium salts and freedom from heavy metallic salts. The Council agreed to the recommendation of the Laboratory, and directed that the recommended revision of the tests be adopted for New and Non-official Remedies, 1923.—Journal A. M. A., November 11, 1922, p. 1687.

Galyl—In 1918, George J. Wallau, Inc., acting as United States distributor for galyl (manufactured by A. Naline, Garenne, France) requested the Council on Pharmacy and Chemistry to consider the product. At that time galyl was stated to be a compound made up of two arsphenamin molecules linked by means of two phosphorus groups. The product was insoluble in water, and for use had to be dissolved in sodium carbonate. It was claimed to be less toxic than arsphenamin, quicker of action on spirilla, and of equal therapeutic value. Later, the composition of galyl was changed. The "new" galyl was stated to be a sodium salt of the "old" galyl. The A. M. A. Chemical Laboratory investigated the new galyl and concluded that, if the compound has the composition claimed for it, it is easily decomposed; that when prepared for administration, either it is partly decomposed into sodium phosphate and sodium arsphenamin or else the original product contains sodium arsphenamin and free phosphate. In either case, injection will probably amount to the administration of phospharsphenamin (if any is present), sodium arsphenamin, sodium phosphate, sodium sulphite, and sugar. In December, 1921, the Laboratory report was sent to the agent and by him transmitted to the French manufacturer. No evidence was received to controvert the findings of the Laboratory that galyl does not have the composition claimed for it. On the other hand, the findings have been supported by independent investigators. Accordingly, the Council declared galyl inadmissible to New and Non-official Remedies because the evidence indicated that it does not have the composition claimed for it; because the therapeutic claims are unwarranted; and because its use under another name than sodium arsphenamine with deceptive claims for its composition is irrational and a detriment to rational therapy.—Journal A. M. A., November 11, p. 1706.

Habitual Use of Barbital—The constant use of even small doses of barbital (veronal) affects the central nervous system. Those taking the drug habitually become much debilitated and seem less able to stand moderate doses. Death has occurred from a 3 gm. dose in addicts. In Great Britain barbital (veronal) has been classified as a poison. Many cases of poisoning occur from its indiscriminate use by the laity.—Journal A. M. A., November 11, 1922, p. 1709.

Aprotein and Aprotine not Admitted to N. N. R.—Aprotein and aprotine are casein preparations marketed as "the foremost tissue and body builders," by the John Norton Co., Columbus, Ohio. Aprotein (formerly designated Aprotein No. 2 Granulated Food Casein) is described in the advertising issued by the John Norton Co. (formerly the Diaprotein Co.) as a "scientifically, specially prepared granulated casein precipitated from fresh skimmed milk, concentrated to a high degree." The Council declared aprotein inadmissible to New and Non-official Remedies because (1) its composition does not agree with a good dietetic casein and was not found to have the composition claimed for it, and (2) it is not only irrational, but also a

hindrance to therapeutics to market a well-known substance like casein under a fanciful name. Aprotine, in the information sent the Council, is designated "a sodium calcium caseinate derivative," prepared by precipitating an acid calcium caseinate from skimmed milk by the addition of acid, washing the precipitate, mixing it with sodium bicarbonate, and drying. A comparison of the analyses furnished the Council suggests that aprotine and aprotein are the same. The advertising claims suggest that aprotine has therapeutic properties, whereas its effects will not differ from those of cottage cheese. The Council on Pharmacy and Chemistry declared aprotine inadmissible to New and Non-official Remedies because (1) the statements made in regard to its composition are indefinite and misleading, (2) the therapeutic claims are unwarranted, and (3) there is no evidence to indicate that this casein preparation presents an improvement over casein, N. N. R.—Journal A. M. A., November 18, 1922, p. 1786.

The Pituitary Hormone.—So far the active principle of the pituitary gland has not been isolated. It is possible that the pituitary contains more than one physiologically potent constituent. Perhaps both pressor and depressor compounds are derivable from the gland structures. Abel and Rhuiller have prepared products from the infundibulum which have both vasomotor and oxytocic effects. These investigators believe that if the product is obtained in the pure state, it will be fifty times more active than histamin, and that there is but a single specific hormone in the infundibulum, and that this has both vasomotor and uterus-stimulating properties as well as a powerful effect on the kidneys. The hope of a speedy isolation of this pituitary hormone as a chemical entity is somewhat shattered by the fact that it is unstable in laboratory manipulations.—Journal A. M. A., November 18, 1922, p. 1770.

Adams' Wonder Capsules.—In newspaper advertisements women and girls are urged to call at some local drug store and talk about their ailments with a kind motherly woman of the experience and sympathetic understanding of Mrs. Gene Case. This noted "health advocate" recommends Adams' Wonder Capsules for girls and women who are "troubled with periodical pains, cramps and headache at Menstral time or who have Neuritis, Neuralgia, stomach, bowel or pladder pain. . . . " The A. M. A. Chemical Laboratory examined Adams' Wonder Capsules and found that the capsules contained the recently introduced drug, benzyl succinate.—Journal A. M. A., November 25, 1922, p. 1876.

Bi-Oxo-Dyn not admitted to N. N. R.—Bi-Oxo-Dyn is put out by "Bi-Oxo-Dyn," Savannah, Ga., according to the information furnished the Council on Pharmacy and Chemistry by W. F. Kennedy, Jr., who states that he is the maker and originator of the product. It is to be inferred that Bi-Oxo-Dyn contains 2 per cent of free (elementary) iodin and 0.1 per cent of hydrastin, 3 per cent of chloral hydrate, 14 per cent of bismuth hydroxid, 1 per cent of menthol in a petrolatum base, and from 0.5 to 1.0 per cent of a compound of succinyl peroxid and boric acid. However, the A. M. A. Chemical Laboratory reported that Bi-Oxo-Dyn contains no free iodin, but that it contains combined iodin in the form of iodid ions and that the presence of hydrogen peroxid or other peroxids could not be demonstrated. The claim is made that Bi-Oxo-Dyn is of inestimable value for injection into the urethra and it is recommended in specific urethritis, uterine hemorrhage and painful cordee.

The Council declared Bi-Oxo-Dyn inadmissable to New and Non-official remedies because (1) the statements of its composition are indefinite, misleading and incorrect, (2) the therapeutic claims are unwarranted, (3) the name is not descriptive of the composition of the product, and (4) Bi-Oxo-Dyn is a complex irrational mixture the marketing of which is detrimental alike to the interests of the public and of scientific medicine.—Journal A. M. A., November 25, 1922, p. 1867.

Commercial Vitamin Preparations.—No student of the subject of vitamins can fail to recognize the ridiculousness of recent attempts to supply alleged vitamin-bearing preparations as cure-alls. It is doubtful if any latent, not to say evident, avitaminosis is prevalent in this country. Nevertheless, preparations sold to supply this alleged need of vitamins should at least not be fraudulent. E. P. Bailey of the Connecticut Experiment Station has determined the potency of some commercial vitamin preparations as compared with that of dried brewers' yeast. The report stated that apparently many manufacturers are not convinced of the efficiency of their vitamin preparations and, therefore, have added various medicaments of established reputation in therapeutics for good measure and to ensure a reaction of some description. Bailey compared the potency of the products on the reasonable assumption that a preparation which in a 100 mg. dose does not exhibit the potency shown by 100 mg. of a good grade of dry brewers' yeast employed under comparable conditions does not justify a claim of superior therapeutic value as a source of water-soluble B vitamin. On this basis, nearly half of the advertised products failed. Others showed only inferior content of vitamin. A few of the products equalled good brewery yeast in potency and only two or three products among nearly two dozen examined showed any superiority of "concentration" over ordinary yeast.—Journal A. M. A. November 25, 1922, p. 1846.

The "Propaganda for Reform" in Germany.—An effort to establish a German Council on Pharmacy and Chemistry was made in Germany before the war. In spite of the demoralizing effects of the war, efforts are again being made in Germany toward the establishment of such a council. A commission of the Aerztevereinsbund, including such well-known men as Professor Heffter, Klemperer, Lenhoff and Schwalbe, has issued an appeal directed particularly against the misleading or fraudulent advertising still so common in many medical journals.

To acquaint the German medical profession with the method of the A. M. A. Council on Pharmacy and Chemistry and the changes that have been brought about in the United States, the Deutsche Medizinische Wochenschrift, of which Dr. Schwalbe is editor, recently published a lengthy article that detailed the organization, aims and objects and accomplishments of the Council.—Journal A. M. A., November 25, 1922, p. 1848.

California Northern District Medical Society (reported by J. R. Snyder, secretary)—The thirty-third semi-annual meeting of the California Northern District Medical Society was held at Sacramento November 14 under the presidency of Nathan G. Hale of Sacramento and with J. R. Snyder of Sacramento as secretary. The scientific meeting was devoted to a program of useful papers by members of the society. At the business meeting the following officers were elected:

President, J. R. Snyder, Sacramento; first vice-president, N. T. Enloe, Chico; second vice-president, J. O. Chiapella, Chico; third vice-president, J. D. Dameron, Stockton; secretary, C. E. Schoff, Sacramento; treasurer, J. O. Stansbury, Chico; board of censors, James H. Parkinson, Sacramento; J. D. Dameron, Stockton; D. H. Moulton, Chico; C. E. Schoff, Sacramento; C. J. Hall, Sacramento.